

**Abstract**

The present invention relates to a method and apparatus for receiving or converting a radio frequency signal. In particular, the present invention relates to a method and apparatus using an electronic circuit to combine a radio frequency signal, also known as a test signal, its  
5 reference signal and a third signal which has its predetermined frequency. The combination of these three signals gives rise to a new signal. The new signal has a frequency that is solely responsive to the predetermined frequency of the third signal. It also has phase information that is responsive to that of the test signal. In addition, the new signal may also have amplitude information that is responsive to that of the test signal.